From: EPAResearchCompass [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C1E8F11508674C3C954553A1129D33E5-EPARESEARCH]

Sent: 1/9/2018 3:26:18 PM

To: ORD-ALL Feds and NonFeds and RSLs [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=2c735272eef941588aefd9a05ed28823-ORD-ALL Feds and NonFeds and RSLs]

CC: Lincoln, Larry [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=8248d03a1441414db7754db201ebec45-Lincoln, Larry]; Barnett, Felicia

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=5773b45cae5142fe950861dd6146f1e9-Barnett, Felicia]; Carter, Bobbi

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=f16dcafe85fc418ebd1651be2e8ab82d-Carter, Bobbi]; Gettle, Jeaneanne

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=d8e72aa7e1894faea44006fd9f22b637-Gettle, Jeaneanne]; Taylor, Dawn

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=b984d00ec06544e498ee5d986f97047c-Taylor, Dawn]; Klinger, Adam

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=346d5466632f4967adc7169c8d2ce4fd-Klinger, Adam]; Widener, Charles

(Chuck) [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=db4c02702e5a4d25aabff1cf8bfa3e36-Widener, Ch]; Liljegren, Jennifer

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=c7098a838cd34f75b8878571fe95d939-JLiljegr]; Pollard, Solomon

[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=16cdf700f8024145847a2770b84abae3-Pollard, Solomon]

Subject: Weekly Compass: January 9, 2018



Weekly Update: 1/9/2018

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the Weekly Compass archive on ORD@work.

Weekly Note from Jennifer

ORDers- This week, I will be meeting with ORD's senior leadership at the EC face-to-face meeting to kick off 2018 and discuss ORD's work plan, which flows from the *Draft FY 2018-2022*

<u>EPA Strategic Plan</u>. We will also be talking about lean management systems, and several other topics.

PFAS continues to be of great interest. ORD and others from EPA will be briefing the Senate Committee on Environment and Public Works this Thursday. Thank you to everyone who has been working hard on the PFAS efforts across ORD.

I hope you all had a relaxing holiday and that you are recharged and rejuvenated for a productive new year.-Jennifer

Quick Updates

- Through 1/15, the Partnership for Public Service is accepting nominations for the 2018 Samuel J. Heyman Service to America Medals, a.k.a. the "Sammies".
- Don't forget to check out the open opportunities on Talent Hub!
- You can donate to your favorite charities through CFC and help ORD reach its 2017 goal of \$61,294! Register now and make your contribution online.
- You can read the This Week @ EPA newsletter here.
- Upcoming webinars:
 - Informational Webinar: How to Apply for an EPA P3 Grant: Thursday, January 11,
 2-3 pm ET
 - ORD & OAM Strategic Partnership for COR Training, "Independent Government Estimates": Tuesday, January 16, 2:30-4pm ET
 - Webinar on new app for EPA small purchase requests: Wednesday, January 17, 2-3 pm ET
 - Legal Research for Everyone: Wednesday, January 17, 2-2:30 pm ET
 - EPA Tools and Resources Webinar: Urban Background Study: Wednesday, January 17, 3-4 pm ET

Photos of the Week: Throwback Tuesday, Volume 2

In the Lab:

Early Pregnancy Exposure to Ozone May Cause Smaller Offspring

A new NHEERL study, led by Urmila Kodavanti, provides the first known causal evidence that ozone exposure during early pregnancy may lead to restricted growth in offspring. This novel work used advanced high-resolution Doppler ultrasonic images of vascular blood flow to offer possible explanations for associations between exposure to air pollutants during pregnancy and adverse outcomes. Results show that early exposure may cause diminished uterine artery flow during later pregnancy, resulting in fetal growth restriction. These findings will improve the scientific community's broader understanding of the relationship between fetal growth and ozone exposure during gestation, and support continued efforts to characterize the long-term health consequences of such exposures in offspring.

Update on Health Effects of Wildland Fire Smoke Exposure

In a timely publication addressing informational needs of state and local public health officials

and clinicians, Wayne Cascio, Acting Director of NHEERL, published an updated review of the human health effects of wildland fire smoke. Wildland fire smoke and human health highlights: the growing contribution of wildfire smoke to impaired air quality, at-risk populations, the attendant adverse health and economic effects of smoke exposure, opportunities for research, and public health actions to decrease exposure and prevent adverse clinical outcomes.

Flint Enforcement Team Meeting

Today, NRMRL's Tom Speth is representing EPA at the Flint National Enforcement Team meeting led by Region 5. At the meeting, progress towards compliance with the January 21, 2016, Safe Drinking Water Act Section 1431 Emergency Order and November 17, 2016, First Amendment will be evaluated. The main topics that are being discussed are enforcement order requirements, current public water system status, and future source water plans.

ORD Providing Technical Support to New State Working Group on Lake Habitat

Lake managers from eight state agencies have established an informal working group to share ideas and strategies for using physical habitat data to inform lake management policies in their states. ORD scientists will provide technical guidance, and act as a catalyst to connect states and tribes that are just starting to use National Aquatic Resource Survey (NARS) data, with states that are veteran users. The workgroup will help states tailor NARS National Lakes Assessment (NARS/NLA) data analysis within the context of types of lakes, human activities, and impacts in their states, and will provide a forum for states to share information about how they connect with lake owner organizations and their state legislatures. NHEERL researchers Tony Olsen and Phil Kaufmann will use data from the NARS/NLA surveys to help examine the effectiveness of various current state laws in protecting nearshore lake habitat. States currently committed to this cooperative federalism project are Vermont, New Hampshire, Maine, Wisconsin, Minnesota, Illinois, Texas, and Washington.

Providing Support to Region 8 on Non-refined Petroleum Waste

The North Dakota Department of Health's Water Quality Division has requested technical information on risk-based approaches for site remediation (e.g., soil screening levels and ASTM methodologies) involving non-refined petroleum waste releases on land. The information will be used in a technical workshop hosted by the state in late January in Bismarck, ND, which will include various stakeholders such as government agencies, industry, and individual landowners. NRMRL's Ed Barth and Jim Weaver are working with OLEM and NCEA to provide the requested technical information to Region 8, who will coordinate the state.

Natural Gas Power Plants and Carbon Capture and Storage

Samaneh Babaee (ORISE) and NRMRL's Dan Loughlin co-authored a journal article, "Exploring the role of natural gas power plants with carbon capture and storage as a bridge to a low-carbon future," which was published in *Clean Technologies and Environmental Policy* on December 22. Results generated with the MARKAL energy system model suggest that natural gas combined-cycle (NGCC) turbines are an effective way to reduce emissions in the short- to mid-term. A large portion of NGCC capacity is later retrofit with carbon capture and storage, indicating that NGCC can be a bridge to and an integral part of a low-carbon future.

Slideshow Features New Monitoring Technology

What do an electric car, a portable lunchbox-sized monitor and solar-powered air sensors have in common? They are all being used in a year-long study to investigate local air quality in three neighborhoods in Kansas City where residents are exposed to air pollution from highways, railways and industry. A new slideshow provides information about the innovative monitoring technology being used in the study. EPA researchers launched the year-long study in October

which uses stationary and mobile measurement technologies to monitor air quality in the community. Local students are participating in a citizen science project for the study using the AirMapper portable monitor developed by EPA. Researchers conducting the study, named the Kansas City Transportation and Local-Scale Air Quality Study (KC-TRAQS), will share results with residents, students and others interested in the project.

TSCA Support

The CSS team continues to provide support for OPPT for the successful implementation of the revised TSCA with ongoing activities on: the development of the alternative toxicity testing strategy document, informing options for chemical prioritization, and the continued improvement of databases, tools, and approaches used to estimate chemical exposure.

NRMRL Scientists Publish Life Cycle Assessment Article

A journal article, which was authored by members of NRMRL's Rapid Life Cycle Inventory Team: Vinit K. Mittal (ORISE) Sidney C. Bailin (Knowledge Evolution) Michael A. Gonzalez, David E. Meyer, William M. Barrett, and Raymond L. Smith, has just been published. The article "Toward Automated Inventory Modeling in Life Cycle Assessment: The Utility of Semantic Data Modeling to Predict Real-World Chemical Production" was published in the American Chemical Society's Sustainable Chemistry and Engineering Journal. This article presents a methodology toward automated inventory modeling of chemical manufacturing in life cycle assessment by developing lineages for chemicals and processes used in the production of a chemical. Once the lineages are established, inventory modeling based on both data mining (top-down) and simulation (bottomup) approaches can be obtained. The ability to generate a cradle-to-gate life cycle for a chemical represents a key achievement toward the ultimate goal of automated life cycle inventory modeling with application to supporting chemical evaluation and alternative assessment.

Oil Spill Book Chapter Features ORD Research

NRMRL's Marc Mills' research on passive sampler usage to determine the source of dissolved polycyclic aromatic hydrocarbons (PAHs) was published as chapter in the book *Oil Spill Environmental Forensics Case Studies*. Researchers used the Ottawa River in Toledo, OH to test the effectiveness of passive samplers in not only measuring pollutant concentrations and bioavailability, but also to determine the source(s) of contamination. This was done by deploying passive samplers over an extended period of time. This innovation has the potential to better target remediation and enforcement actions.

Soil and Dust Research Featured

The Environmental Defense Fund (EDF) has featured multimedia lead exposure modeling done by ORD scientists in a series of blog posts. The latest posting, dated December 15, uses the estimates of how lead exposure sources vary with early childhood age (published by ORD last year in EHP) to argue that soil and dust are critical sources of lead exposure risk in early childhood. These estimates may be important as EPA prepares a response to a court-ordered 90-day deadline to update the Agency's 17-year-old standard for lead contamination in soil and dust.

Grantee Publication on Air Pollution and Interstitial Lung Disease

Exposure to nitrogen oxides was associated with Interstitial Lung Disease (ILD) in a study on older adults' part of the MESA Air project at the University of Washington. ILD is a group of chronic lung diseases characterized by pulmonary inflammation and fibrosis, affecting about 0.5% of older adults, and generally diagnosed late in the disease development. Taking advantage of the CT scans performed on 5495 older adults in the MESA Air cohort, investigators were able to observe early stages of the disease before symptoms were apparent, and related them to exposures to air pollutants. The odds of abnormalities increased by 1.77 times per every

40 ppb increase of nitrogen oxides (NOx). Exposure to fine particles (PM2.5), NOx and NO2 concentrations showed some association with the progression of attenuation abnormalities, though these varied by ethnicity. The study provides an early indication that air pollution could be a risk factor for ILD, but definitive evidence will require additional analyses.

Grantee Publication on Using Plant Tissues

Researchers at the Wisconsin University's Human Models for Analysis of Pathways (HMAPs) Center have developed methods to maintain the structural complexity of decellularized plant tissues and biofunctionalize them to form three-dimensional scaffolds that can then be primed and seeded with human stem cells. The commercial success of any tissue engineering products requires efficacy, cost effectiveness, and the possibility of scale-up. The HMAP research team has shown that it is feasible to use plant tissues as an alternative feedstock of microphysiological scaffolds for mammalian cells.

OSP Support

- On January 4, Regina Poeske (Region 3 RSL), along with the Region 3 Administrator and RS&T Director, met with the Director of the Region 3 Lab in Fort Meade, MD, to discuss lab capabilities and opportunities for state engagement.
- On January 2, OSP's Diana Cutt provided technical support for an area of concern at the
 Atlantic Fleet Weapons Training Area Superfund Site in Vieques, PR, a former Naval
 facility where munitions were fired and stored. Diana reviewed the site's Remedial Action
 Work Plan Addendum that proposes using in-situ chemical oxidation treatment to address
 groundwater contamination. This site is one of Puerto Rico's highest priority cleanup
 concerns.

Technical Support on Clean Water Act's Final Biennial Effluent Guidelines

Today, OSP will represent ORD at the Final Agency Review meeting held by OW. The Clean Water Act requires EPA to publish a biennial effluent guidelines plan, including identification of any effluent limitation guidelines rulemakings and their associated schedules. The purpose of this meeting is to get approval to publish the final plan. ORD anticipates concurring without comment.

Groundwater Co-contaminant Behavior of Arsenic and Selenium

NRMRL's Richard Wilkin, Tony Lee and Doug Beak, and Region 8's Betsy Burns have co-authored a paper, "Groundwater co-contaminant behavior of arsenic and selenium at a lead and zinc smelting facility," which was published in *Applied Geochemistry*. This article summarizes research undertaken to evaluate the geochemical relationship between the behaviors of arsenic and selenium in groundwater plumes. The work provides quantitative analysis of case study data from a former lead and zinc smelting facility in Region 8. The study informs risk management considerations for restoring contaminated groundwater.

PFAS Concentrations Data Discussion

Yesterday, NERL's Valerie Zartarian led an internal teleconference discussion among scientists in ORD and EPA program and regional offices. The discussion focused on available data and a potential approach for multimedia modeling to help estimate the relative contributions of human exposure pathways for priority PFAS chemicals and sources.

Webinar on the National Stormwater Calculator Has Record Registration

Over 1,700 people are registered for the January 31 webinar from 2:00-3:00 pm ET. Jason Bernagros will provide both potential and example applications, along with presenting the new

cost module and mobile web application version designed for desktops and mobile devices, such as smartphones and tablets. Register Here.

In the Office:

CFC Ends This Week

It's the last week to donate to your favorite charities through CFC! Register here and make your contribution by Friday, January 12.

Enter your FY18 First Quarter Data into TechTracker by Friday, January 12

The first quarter for Fiscal Year 2018 (FY18) has ended, and it is time to develop the first quarterly report of <u>TechTracker</u> data. To ensure that all FY18 First Quarter data is in the system prior to developing the report, we are asking that everyone create any remaining entries for technical support performed during the first quarter (Oct. 1 through Dec. 31, 2017) or add hours to existing entries as necessary for any additional time spent on those tasks in that timeframe. Please have all applicable technical support hours for work entered into <u>TechTracker</u> by Friday, January 12 COB.

Accolades:

NARS Team Members Highlighted by OW

Several NHEERL researchers who are part of the National Aquatic Resource Surveys (NARS) team were mentioned in an Office of Water "shout out" for their work on the NARS national meeting with states in Silver Spring, MD, December 5-7. The Conservation Technology Information Center and the NARS team hosted 114 participants over three days. Among the named individuals who developed materials, gave presentations, moderated sessions, and facilitated break-out groups during the meeting were Steve Paulsen, Tony Olsen, Dave Peck, Phil Kaufmann, Amanda Nahlik and Peg Pelletier. In the coming months the NARS team will be applying what was discussed at the meeting and working with partners to prioritize actions for improvements.

NHEERL Postdoc Receives SOT Award

NHEERL postdoctoral fellow Samantha Snow has been selected as the recipient of the 2018 Celebrating Women in Toxicology Award sponsored by the Society of Toxicology's Women in Toxicology Special Interest Group. The award is given on the basis of scientific merit and outstanding demonstration of leadership and service to the scientific/toxicology community. Dr. Snow's abstract, "Bittersweet: Real-Time, Dynamic Changes in Blood Glucose Levels during an Acute Ozone Exposure in Rats," is the product of a successful Stage 1 Pathfinder Innovation Project, which utilizes newly developed radio-telemetry technology to capture real-time quantitative glucose and core body temperature data in freely moving animals prior to, during, and following an environmental exposure.

In the News:

Freshwater Harmful Algal Blooms Grant Awards

On Thursday, January 4, EPA announced two grants, funded through the Science to Achieve Results (STAR) program, for innovative research on the prediction, prevention, control, and mitigation of freshwater harmful algal blooms (HABs). Ohio State University and Iowa State University are conducting research to better understand the effects from less-common, less studied, and emerging freshwater HAB species and toxins.

In the Community:

EPA-RTP STEM Outreach Program

Yesterday and today, EPA-RTP's Community Engagement and STEM Education Program judged Junior Engineering projects at the Engineering Academy at Middle Creek High School in Raleigh.

Photos of the Week: Throwback Tuesday, Volume 2

While moving offices in DC, back issues of the ORD Times from 1979-1980 were discovered! See below for the <u>second</u> in a series of ORD newsletters that came long before the Weekly Compass. You can see the <u>first</u> one here.

The New OKA Times

Votume L.,No. 2

FRIDAY, OCTOBER 5, 1979

Research Committees Expanded to Cover Most of ORD Research

frenk (oring Program (oring

Weekington CRIV and a major in particular of the control of control of the contro

performs dentitied where and detected by the companies of the companies of

The control of the co

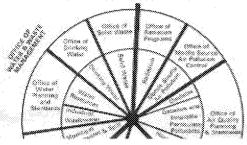
contention with the year's cut of decomposite to a great first according to the original country of the contention will also a contention of the contention

Newly Appointed DAA



Washington—Th. Visus R. Bast, an environment has be signed, in the Dapris Assessed Administration for Build Faceards. As the Computer of the C

(PA Research Committee Structure



View from the Hill: Regulatory agencies under attack

66 Managana Phanasa Managana Kapadaka

Washington Rooms automas in the School and House give revisions conductive to small entered the Lorentz give revisions and control and according to the conductive for the Conductive Special Control and the Providence Conductive of the Providence Conductive Condu

The accordance of smice (calcular) (1) housests approved of a Bompon (1) house strategies of a second of a source the Agency from Combing any mission of all and come interpretation can be seen as the following Sites who truly appression that and Different interests and Province Connection Committee automaticating the Montal Con-sistence when the William and Condifficult for the new Yorks, McKilomics

Who should you could be about the arms of the country of the count What who have, but has, been able to men the fact to ensure another mental have, but if it becomes the fact to ensure another deficient for these to account to about the fact to the fact

the colors where the colors of process of the colors where the colors of the

ORD Profile: Mike Mastracci Regional Services Staff

Biologi M. Links

Water give State the being processed on the early flower Engineer State and English Water Engineer the 12 persons Regions State State and State State on The Projection to December and of the last back being being the English Engineer to English English and the State State of the State St

What is a regional services staff!

What is a regional corrient scale.

Of each to RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a reposable to a constant of the RNA is a

What are the key functions of the staff.

Effective and product edictions him between the ORED and the Regions to the ORED and the Regions for the ORED and the Regions of the Regions of the Regions

According to the control of the cont



Regions for and come. They are assisted by Province - Englescoped - State of Research States and Education - Englescoped - States and Research States - Englescoped - Engl

DAA Appointment

Continued From Page 1

A comment along the control of the c

Winners of Innovative Research Awards

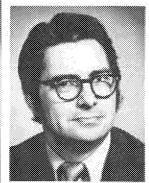
Control Contro

Constitution of the consti

controlled for applications, august a second controlled processing and the second con

Additional part of comments of control of the part of





Secretary Original and Line Benginganian Secretary Secre





Research Summaries Launched to Fill Information Gap

Mari Schooler From a Laboration Office

Control of the Contro

Constitute manufacture and production continued as a continued as

Secretary bear form the large contents of the content of the conte



The first Broad Solomer comme

Fill Information Gap

Continued from Page 3

Doming Water and Secure Money Dominal Support of the second on months. Community to Other of Research Program Association of the Secure OLD PM (Second Secure OLD PM) (Second Secure OLD PM) (Secure OLD PM) (

People on the Move...

Washington - I in right to provide the felt received of the felt received of the fermation of the confidence of the felt received of the Agency I had been early of the felt received of the Agency I had been early of the felt received of the

ignitive active. Denoted I. Vermont is active procession on Protocols.

In this recognition content Office of Amendment Conference of the Conference of the

NEWS FROM THE LABS

New Appointment

Reward Thomps Fast. Dr. Robert C. Lean has been as med Cherl of the Analysis. Comment of State of the Analysis. Comment of the ISS 18 (1988). Been as the ISS 18 (1988). As the ISS 18 (1988).

